

Preliminary Amendment

Applicant: Robert-Christian Hagen, et al.
Serial No.: Not yet assigned
(Priority Application No. 10 2004 010 614.2)
(International Application No. PCT/DE2005/000307)
Filed: Herewith
(Priority Date: 2 March 2004)
(International Filing Date: 23 February 2005)
Docket No.: I431.175.101/FIN592PCT/US
Title: **BASE SEMICONDUCTOR COMPONENT FOR A SEMICONDUCTOR COMPONENT STACK AND
METHOD FOR THE PRODUCTION THEREOF**

IN THE CLAIMS

Please cancel claims 1-14 without prejudice.

Please add claims 15-27 as follows:

~~Patent Claims~~ **WHAT IS CLAIMED IS:**

1.-14. (Cancelled)

15. (New) A base semiconductor component for a semiconductor component stack comprising:

a semiconductor chip arranged on a stiff wiring substrate, the wiring substrate having contact pads on its upper side in edge regions and external contacts of the base semiconductor component on its underside opposite to the semiconductor chip;

contact areas of an integrated circuit of the active upper side of the semiconductor chip and/or the external contacts together with the contact pads are electrically connected to one another via wiring lines and/or through contacts of the wiring substrate;

a deformable interconnection film defines the upper side of the base component and has a freely accessible arrangement pattern of stack contact areas arranged congruently with respect to external contacts of a semiconductor component to be stacked;

the interconnection film is deformed in its edge regions toward the contact pads of the wiring substrate; and

the stack contact areas are electrically connected to the contact pads of the wiring substrate via conductor tracks of the interconnection film.

16. (New) The base semiconductor component as claimed in claim 15, comprising wherein the semiconductor chip has flip-chip contacts which are connected via wiring lines to the contact pads, and via wiring lines on the upper side and through contacts to the underside of the wiring substrate, and also via wiring lines on the underside of the wiring substrate to external contact areas, the external contact areas having the external contacts.

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17. (New) The base semiconductor component as claimed in claim 16, comprising wherein the external contacts have solder balls and are arranged on the underside of the wiring substrate in a matrix.
18. (New) The base semiconductor component as claimed in claim 15, comprising where the interconnection film is concomitantly arranged on the rear side of a base semiconductor chip.
19. (New) The base semiconductor component as claimed in one claim 15, comprising a supporting plate arranged between the interconnection film and the semiconductor chip.
20. (New) The base semiconductor component as claimed in claim 15, comprising where the base semiconductor component and the stacked semiconductor component are electrically connected via the stack contact areas of the interconnection film.
21. (New) The base semiconductor component as claimed in claim 15, comprising where the interconnection film has a plurality of mutually insulated layers with conductor tracks.
22. (New) The base semiconductor component as claimed in claim 15, comprising wherein the semiconductor chip of the base semiconductor component is embedded in a plastics composition.
23. (New) The base semiconductor component as claimed in claim 15, comprising wherein the semiconductor chip of the base semiconductor component is electrically connected to the contact pads via bonding wire connections.
24. (New) The base semiconductor component as claimed in claim 15, comprising wherein the connection locations between contact pads and conductor tracks of the

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interconnection film, in the edge regions of the wiring substrate, are embedded in a plastic covering.

25. (New) A method for the production of a base semiconductor component comprising:
- producing a stiff wiring carrier with a central semiconductor chip on its upper side and contact pads in edge regions of the upper side, and also external contact areas on its underside, the external contact areas and the contact pads and also contact areas of an integrated circuit of the semiconductor chip being electrically connected to one another;
 - producing a deformable interconnection film with stack contact areas on its upper side, which have an arrangement pattern that is congruent with respect to an arrangement pattern of external contacts of a semiconductor component to be stacked, and with conductor tracks on its underside, which are connected to the stack contact areas and extend right into the edge regions of the intermediate carrier film, the conductor tracks having an arrangement pattern that is congruent with respect to the arrangement pattern of the contact pads;
 - applying the interconnection film by its underside onto the wiring carrier with semiconductor chip; and
 - deforming the edge sides of the interconnection film with the conductor tracks being connected to the contact pads.

26. (New) The method as claimed in claim 25, comprising wherein before the interconnection film is applied onto the wiring substrate, applying a supporting plate onto the underside of the interconnection film.

27. (New) The method as claimed in claim 25, comprising wherein before the interconnection film is applied, embedding the semiconductor chip in a plastics composition.

28. (New) The method as claimed in claim 26, comprising wherein after the conductor tracks have been connected to the contact pads, the connection locations are embedded in a plastic covering.

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29. (New) A semiconductor component stack having a base semiconductor component comprising:

a semiconductor chip arranged centrally on a stiff wiring substrate;
the wiring substrate has, in its edge regions, contact pads which are electrically connected to external contacts and at the same time to contact areas of the semiconductor chip and also to stack contact areas; and
the stack contact areas simultaneously form an upper side of the base semiconductor component and have an arrangement pattern corresponding to an arrangement pattern of external contacts of a semiconductor component to be stacked.

30. (New) A base semiconductor component for a semiconductor component stack comprising:

a semiconductor chip arranged on a stiff wiring substrate, the wiring substrate having contact pads on its upper side in edge regions and external contacts of the base semiconductor component on its underside opposite to the semiconductor chip;

contact areas of an integrated circuit of the active upper side of the semiconductor chip and/or the external contacts together with the contact pads are electrically connected to one another via wiring lines and/or through contacts of the wiring substrate;

a deformable interconnection film defines the upper side of the base component and has a freely accessible arrangement pattern of stack contact areas arranged congruently with respect to external contacts of a semiconductor component to be stacked;

the interconnection film is deformed in its edge regions toward the contact pads of the wiring substrate; and

the stack contact areas are electrically connected to the contact pads of the wiring substrate via conductor tracks of the interconnection film, and

wherein the interconnection film is arranged concomitantly on the rear side of a base semiconductor chip, and a supporting plate is arranged between the interconnection film and the semiconductor chip.

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31. (New) The base semiconductor component as claimed in claim 30, comprising electrically connecting the base semiconductor component and the stacked semiconductor component via the stack contact areas of the interconnection film.
32. (New) The base semiconductor component as claimed in claim 31, comprising wherein the interconnection film has a plurality of mutually insulated layers with conductor tracks.
33. (New) The base semiconductor component as claimed in claim 32, comprising where the semiconductor chip of the base semiconductor component is embedded in a plastics composition.
34. (New) A base semiconductor component for a semiconductor component stack comprising:
- means for providing a semiconductor chip arranged centrally on a stiff wiring substrate;
 - means for providing contact pads in edge regions of the wiring substrate, which are electrically connected to external contacts and at the same time to contact areas of the semiconductor chip and also to stack contact areas; and
 - the stack contact areas simultaneously form an upper side of the base semiconductor component and have an arrangement pattern corresponding to an arrangement pattern of external contacts of a semiconductor component to be stacked.